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Ergin, M. T. *See* Mukherji, Guha, Chakraborty, Sivanandham, Nashed, and Ergin.
Erlich, H. A. *See* Bill, Yagüe, Appel, White, Horn, Erlich, and Palmer.
Espevik, T. *See* Waage, Brandtzaeg, Halstensen, Kierulf, and Espevik.
Everson, M. P. *See* Beagley, Eldridge, Lee, Kiyono, Everson, Koopman, Hirano, Kishimoto, and McGhee.
Ezekowitz, R. A. B., Kuhlman, M., Groopman, J. E., and Byrn, R. A. A human serum mannose-binding protein inhibits in vitro infection by the human immunodeficiency virus. 185.
— *See* Kuhlman, Joiner, and Ezekowitz.

F

Fabbi, M. *See* Groh, Porcelli, Fabbi, Lanier, Picker, Anderson, Warnke, Bhan, Strominger, and Brenner.
Fathman, C. G. *See* Butterfield, Fathman, and Budd.
— *See* Romani, Koide, Crowley, Witmer-Pack, Livingstone, Fathman, Inaba, and Steinman.
Fava, R., Olsen, N., Keski-Oja, J., Moses, H., and Pincus, T. Active and latent forms of transforming growth factor β activity in synovial effusions. 291.
Fearon, D. T. *See* Wong, Cahill, Rosen, Kennedy, Bonaccio, Morris, Wilson, Klickstein, and Fearon.
Fenderson, B. A. *See* Andrews, Gönczöl, Fenderson, Holmes, OMalley, Hakomori, and Plotkin.
Fenouillet, E., Clerget-Raslain, B., Gluckman, J. C., Guétard, D., Montagnier, L., and Bahraoui, E. Role of *N*-linked glycans in the interaction between the envelope glycoprotein of human immunodeficiency virus and its CD4 cellular receptor.Structural enzymatic analysis. 807.
Fernandez-Botran, R., Sanders, V. M., and Vitetta, E. S. Interactions between receptors for interleukin 2 and interleukin 4 on lines of helper T cells (HT-2) and B lymphoma cells (BCL_1). 379.
Ferrans, V. J. *See* Fouret, Du Bois, Bernaudin, Takahashi, Ferrans, and Crystal.
Fiers, W. *See* Brouckaert, Spriggs, Demetri, Kufe, and Fiers.
— *See* Rampart, De Smet, Fiers, and Herman.
Fischer, A. C., Beschorner, W. E., and Hess, A. D. Requirements for the induction and adoptive transfer of cyclosporine-induced syngeneic graft-versus-host disease. 1031.
Fischer, A. *See* Linsk, Watts, Fischer, and Goodenow.
Fischetti, V. A. *See* Bessen, Jones, and Fischetti.
Fisher, R. C. *See* Staunton, Fisher, LeBeau, Lawrence, Barton, Francke, Dustin, and Thorley-Lawson.
Folks, T. *See* Kulaga, Folks, Rutledge, Truckenmiller, Gugel, and Kindt.
Fouret, P., Du Bois, R. M., Bernaudin, J.-F., Takahashi, H., Ferrans, V. J., and Crystal, R. G. Expression of the neutrophil elastase gene during human bone marrow cell differentiation. 833.
Fox, R. I. *See* Saito, Servenius, Compton, and Fox.
Francke, U. *See* Staunton, Fisher, LeBeau, Lawrence, Barton, Francke, Dustin, and Thorley-Lawson.
Frangione, B. *See* Levy, Lopez-Otin, Ghiso, Geltner, and Frangione.
Fredrickson, G. G., and Basch, R. S. L3T4 antigen expression by hemopoietic precursor cells. 1473.
Freedman, A. S. *See* Schriever, Freedman, Freeman, Messner, Lee, Daley, and Nadler.
Freeman, G. *See* Schriever, Freedman, Freeman, Messner, Lee, Daley, and Nadler.
Friedman, S. M. *See* Bhardwaj, Lau, Friedman, Crow, and Steinman.

Fu, S. M. *See* Nakamura, Sung, Bjorndahl, and Fu.
Fuller, B. B. *See* Bouchard, Fuller, Vijayasaradhi, and Houghton.
Furukawa, K. S., Furukawa, K., Real, F. X., Old, L. J., and Lloyd, K. O. A unique antigenic epitope of human melanoma is carried on the common melanoma glycoprotein gp95/p97. 585.
Furukawa, K. *See* Furúkawa, Furukawa, Real, Old, and Lloyd.

G

Gaither, K. K., and Harley, J. B. A shared idiotype among human anti-Ro/SSA autoantibodies. 1583.
Gammon, G. M. *See* Clayton, Gammon, Ando, Kono, Hood, and Sercarz.
Garcia-Peñarrubia, P., Koster, F. T., Kelley, R. O., McDowell, T. D., and Bankhurst, A. D. Antibacterial activity of human natural killer cells. 99.
Gaulton, G. N., and Greene, M. I. Inhibition of cellular DNA synthesis by reovirus occurs through a receptor-linked signaling pathway that is mimicked by antiidiotypic, antireceptor antibody. 197.
Gearhart, P. J. *See* Levy, Malipiero, Lebecque, and Gearhart.
Geha, R. S. *See* Vercelli, Jabara, Arai, and Geha.
Geltner, D. *See* Levy, Lopez-Otin, Ghiso, Geltner, and Frangione.
Gemski, P. *See* Cross, Sadoff, Kelly. Bernton, and Gemski.
Geraghty, D. E. *See* Koller, Geraghty, DeMars, Duvick, Rich, and Orr.
Gerlach, H. *See* Brett, Gerlach, Nawroth, Steinberg, Godman, and Stern.
Gery, I. *See* Sanui, Redmond, Kotake, Wiggert, Hu, Margalit, Berzofsky, Chader, and Gery.
Ghiso, J. *See* Levy, Lopez-Otin, Ghiso, Geltner, and Frangione.
Gjerde, H. *See* Sollid, Markussen, Ek, Gjerde, Vartdal, and Thorsby.
Gleich, G. J. *See* Ten, Pease, McKean, Bell, and Gleich.
Glickman, E. *See* Nickerson, Berman, Glickman, Chess, and Alt.
Gluckman, J. C. *See* Fenouillet, Clerget-Raslain, Gluckman, Guétard, Montagnier, and Bahraoui.
Godman, G. *See* Brett, Gerlach, Nawroth, Steinberg, Godman, and Stern.
Goethals, A. *See* Van Snick, Goethals, Renauld, Van Roost, Uyttenhove, Rubira, Moritz, and Simpson.
Goldberg, E. H. *See* De Pirro and Goldberg.
Gönczöl, E. *See* Andrews, Gönczöl, Fenderson, Holmes, OMalley, Hakomori, and Plotkin.
Good, M. F. *See* Carter, Graves, Quakyi, and Good.
Good, R. A. *See* Mayumi and Good.
Goodenow, R. S. *See* Linsk, Watts, Fischer, and Goodenow.
Goodwin, R. G. *See* Morrissey, Goodwin, Nordan, Anderson, Grabstein, Cosman, Sims, Lupton, Acres, Reed, Mochizuki, Eisenman, Conlon, and Namen.
Gordon, S. *See* Crocker and Gordon.
— *See* Rosen, Milon, and Gordon.
Goto, Y. *See* Takeshita, Goto, Tada, Nagata, Asao, and Sugamura.
Gotschlich, E. C. *See* Wetzler, Gotschlich, Blake, and Koomey.
Grabstein, K. H. *See* Morrissey, Goodwin, Nordan, Anderson, Grabstein, Cosman, Sims, Lupton, Acres, Reed, Mochizuki, Eisenman, Conlon, and Namen.
Gracie, J. A. *See* Bolton, Gracie, Briggs, Kampinga, and Bradley.
Graves, P. M. *See* Carter, Graves, Quakyi, and Good.
Greenbaum, L. *See* Johnson, Greenbaum, Bottomly, and Trowbridge.
Greenberg, J. M. *See* Griesinger, Arthur, Brunning, Parkin, Ochoa, Miller, Wilkowski, Greenberg, Hurvitz, and Kersey.
Greenberg, P. D. *See* Klarnet, Kern, Okuno, Holt, Lilly, and Greenberg.
Greene, M. I. *See* Gaulton and Greene.
Greulich, S. *See* Bhakdi, Greulich, Muhly, Eberspächer, Becker, Thiele, and Hugo.
Griesinger, F., Arthur, D. C., Brunning, R., Parkin, J. L., Ochoa, A. C., Miller, W. J., Wilkowski, C. W., Greenberg, J. M., Hurvitz, C., and Kersey, J. H. Mature T-lineage leukemia wih growth factor–induced multilineage differentiation. 1101.
Griskey, P. *See* Cassatella, Anegón, Cuturi, Griskey, Trinchieri, and Perussia.
Groh, V., Porcelli, S., Fabbi, M., Lanier, L. L., Picker, L. J., Anderson, T., Warnke, R. A., Bhan, A. K., Strominger, J. L., and Brenner, M. B. Human lymphocytes bearing T cell receptor γ/δ are phenotypically diverse and evenly distributed throughout the lymphoid system. 1277.
Groopman, J. E. *See* Ezekowitz, Kuhlman, Groopman, and Byrn.
Gross, S. S. *See* Stuehr, Gross, Sakuma, Levi, and Nathan.
Grosveld, G. *See* Van Denderen, Hermans, Meeuwsen, Troelstra, Zegers, Boersma, Grosveld, and Van Ewijk.
Guétard, D. *See* Fenouillet, Clerget-Raslain, Gluckman, Guétard, Montagnier, and Bahraoui.
Gugel, E. *See* Kulaga, Folks, Rutledge, Truckenmiller, Gugel, and Kindt.
Guha, A. *See* Mukherji, Guha, Chakraborty, Sivanandham, Nashed, and Ergin.

H

Haasch, D. *See* Hagman, Lo, Doglio, Hackett, Rudin, Haasch, Brinster, and Storb.
Hackett, C. J. *See* Eisenlohr and Hackett.
Hackett, J., Jr. *See* Hagman, Lo, Doglio, Hackett, Rudin, Haasch, Brinster, and Storb.
Hagman, J., Lo, D., Doglio, L. T., Hackett, J., Jr., Rudin, C. M., Haasch, D., Brinster, R., and Storb, U. Inhibition of immunoglobulin gene rearrangement by the expression of a λ2 transgene. 1911.
Hakoda, M., Hirai, Y., Shimba, H., Kusunoki, Y., Kyoizumi, S., Kodama, Y., and Akiyama, M. Cloning of phenotypically different human lymphocytes originating from a single stem cell. 1265.

Hakomori, S.-I. *See* Andrews, Gönczöl, Fenderson, Holmes, OMalley, Hakomori, and Plotkin.

Halstensen, A. *See* Waage, Brandtzaeg, Halstensen, Kierulf, and Espevik.

Hamada, K. *See* Burke, Hirschfeld, Shirayoshi, Kasik, Hamada, Appella, and Ozato.

Hameed, A., Olsen, K. J., Lee, M.-K., Lichtenheld, M. G., and Podack, E. R. Cytolysis by Ca-permeable transmembrane channels.Pore formation causes extensive DNA degradation and cell lysis. 765.

Hamilton, J. A. *See* Hart, Vitti, Burgess, Singleton, and Hamilton.

Hammen, M. J. *See* Schoenbeck, Hammen, and Kagnoff.

Hancock, G. E., Cohn, Z. A., and Kaplan, G. The generation of antigen-specific, major histocompatibility complex-restricted cytotoxic T lymphocytes of the $CD4^+$ phenotype.Enhancement by the cutaneous administration of interleukin 2. 909.

Hancock, G. *See* Kaplan, Kiessling, Teklemariam, Hancock, Sheftel, Job, Converse, Ottenhoff, Becx-Bleumink, Dietz, and Cohn.

Haney, J. A. *See* Kozbor, Trinchieri, Monos, Isobe, Russo, Haney, Zmijewski, and Croce.

Hao, Z. *See* Perno, Yarchoan, Cooney, Hartman, Webb, Hao, Mitsuya, Johns, and Broder.

Haqqi, T. M., Banerjee, S., Anderson, G. D., and David, C. S. RIII S/J ($H\text{-}2^r$).An inbred mouse strain with a massive deletion of T cell receptor $V\beta$ genes. 1903.

Hardy, R. R. *See* Hayakawa and Hardy.

Harley, J. B. *See* Gaither and Harley.

Hart, P. H., Vitti, G. F., Burgess, D. R., Singleton, D. K., and Hamilton, J. A. Human monocytes can produce tissue-type plasminogen activator. 1509.

Hartley, J. K. *See* Hünig, Wallny, Hartley, Lawetzky, and Tiefenthaler.

Hartman, N. R. *See* Perno, Yarchoan, Cooney, Hartman, Webb, Hao, Mitsuya, Johns, and Broder.

Hasemann, C. *See* Meek, Hasemann, Pollok, Alkan, Brait, Slaoui, Urbain, and Capra.

Hashimoto, Y. T cell receptor β gene has two downstream DNase I hypersensitive regions.Possible mechanisms of tissue- and stage-specific gene regulation. 2097.

Hata, S., Clabby, M., Devlin, P., Spits, H., De Vries, J. E., and Krangel, M. S. Diversity and organization of human T cell receptor δ variable gene segments. 41.

Haughton, G. *See* Mercolino, Locke, Afshari, Sasser, Travis, Arnold, and Haughton.

Hayakawa, K., and Hardy, R. R. Phenotypic and functional alteration of $CD4^+$ T cells after antigen stimulation. Resolution of two populations of memory T cells that both secrete interleukin 4. 2245.

Heber-Katz, E. *See* Burns, Li, Shen, Offner, Chou, Vandenbark, and Heber-Katz.

Heinzel, F. P., Sadick, M. D., Holaday, B. J., Coffman, R. L., and Locksley, R. M. Reciprocal expression of interferon γ or interleukin 4 during the resolution or progression of murine leishmaniasis. Evidence for expansion of distinct helper T cell subsets. 59.

Hengartner, H. *See* Schneider, Lees, Pedrazzini, Zinkernagel, Hengartner, and MacDonald.

Henry, W. L. *See* Albina, Caldwell, Henry, and Mills.

Herberman, R. B. *See* Chambers, Vujanovic, DeLeo, Olszowy, Herberman, and Hiserodt.

Herman, A. G. *See* Rampart, De Smet, Fiers, and Herman.

Hermans, A. *See* Van Denderen, Hermans, Meeuwsen, Troelstra, Zegers, Boersma, Grosveld, and Van Ewijk.

Herrmann, S. H. *See* Rosenstein, Ratnofsky, Burakoff, and Herrmann.

Hess, A. D. *See* Fischer, Beschorner, and Hess.

Hill, J. O., Awwad, M., and North, R. J. Elimination of $CD4^+$ suppressor T cells from susceptible BALB/c mice releases $CD8^+$ T lymphocytes to mediate protective immunity against *Leishmania*. 1819.

Hirai, Y. *See* Hakoda, Hirai, Shimba, Kusunoki, Kyoizumi, Kodama, and Akiyama.

Hirano, T. *See* Beagley, Eldridge, Lee, Kiyono, Everson, Koopman, Hirano, Kishimoto, and McGhee.

Hirose, Y. *See* Shimizu, Yoshioka, Hirose, Sugai, Tachibana, and Konda.

Hirschfeld, S. *See* Burke, Hirschfeld, Shirayoshi, Kasik, Hamada, Appella, and Ozato.

Hiserodt, J. C. *See* Chambers, Vujanovic, DeLeo, Olszowy, Herberman, and Hiserodt.

Hockett, R. D. *See* Bora, Lublin, Kumar, Hockett, Holers, and Atkinson.

Hoffman, W. D. *See* Natanson, Eichenholz, Danner, Eichacker, Hoffman, Kuo, Banks, MacVittie, and Parrillo.

Holaday, B. J. *See* Heinzel, Sadick, Holaday, Coffman, and Locksley.

Holers, V. M., Ruff, T. G., Parks, D. L., McDonald, J. A., Ballard, L. L., and Brown, E. J. Molecular cloning of a murine fibronectin receptor and its expression during inflammation. Expression of VLA-5 is increased in activated peritoneal macrophages in a manner discordant from major histocompatibility complex class II. 1589.

— *See* Bora, Lublin, Kumar, Hockett, Holers, and Atkinson.

Holmes, E. H. *See* Andrews, Gönczöl, Fenderson, Holmes, OMalley, Hakomori, and Plotkin.

Holt, C. *See* Klarnet, Kern, Okuno, Holt, Lilly, and Greenberg.

Honjo, T. *See* Noma, Nakakubo, Sugita, Kumagai, Maeda, Shimizu, and Honjo.

Hood, L. *See* Clayton, Gammon, Ando, Kono, Hood, and Sercarz.

Horn, G. *See* Bill, Yagüe, Appel, White, Horn, Erlich, and Palmer.

Horwitz, M. A. *See* Blander and Horwitz.

Houghton, A. N. *See* Bouchard, Fuller, Vijayasaradhi, and Houghton.

Hoy, J. F. *See* Miller, Hoy, and Thomas.

Hu, L.-H. *See* Sanui, Redmond, Kotake, Wiggert, Hu, Margalit, Berzofsky, Chader, and Gery.

Hugo, F. *See* Bhakdi, Greulich, Muhly, Eberspächer, Becker, Thiele, and Hugo.

Hünig, T., Wallny, H.-J., Hartley, J. K., Lawetzky, A., and Tiefenthaler, G. A monoclonal antibody to a constant determinant of the rat T cell antigen receptor that induces T cell activation. Differential reactivity with subsets of immature and mature T lymphocytes. 73.

Hurvitz, C. *See* Griesinger, Arthur, Brunning, Parkin, Ochoa, Miller, Wilkowski, Greenberg, Hurvitz, and Kersey.

Hussey, R. E. *See* Sayre, Hussey, Chang, Ciardelli, and Reinherz.

I

Ihle, J. N. *See* Weinstein, Morishita, Cleveland, and Ihle.

Iida, K., Whitlow, M. B., and Nussenzweig, V. Amastigotes of *Trypanosoma cruzi* escape destruction by the terminal complement components. 881.

Inaba, K. *See* Romani, Inaba, Puré, Crowley, Witmer-Pack, and Steinman.

— *See* Romani, Koide, Crowley, Witmer-Pack, Livingstone, Fathman, Inaba, and Steinman.

Ishii, A. *See* Yonehara, Ishii, and Yonehara.

Isobe, M. *See* Kozbor, Trinchieri, Monos, Isobe, Russo, Haney, Zmijewski, and Croce.

J

Jabara, H. H. *See* Vercelli, Jabara, Arai, and Geha.

Jamieson, B. D., and Ahmed, R. T cell memory. Long-term persistence of virus-specific cytotoxic T cells. 1993.

Jiang, S. *See* Liu, Jiang, Persechini, Zychlinsky, Kaufman, and Young.

Job, C. K. *See* Kaplan, Kiessling, Teklemariam, Hancock, Sheftel, Job, Converse, Ottenhoff, Becx-Bleumink, Dietz, and Cohn.

Johns, D. G. *See* Perno, Yarchoan, Cooney, Hartman, Webb, Hao, Mitsuya, Johns, and Broder.

Johnson, P., Greenbaum, L., Bottomly, K., and Trowbridge, I. S. Identification of the alternatively spliced exons of murine CD45 (T200) required for reactivity with B220 and other T200-restricted antibodies. 1179.

Joiner, K. *See* Kuhlman, Joiner, and Ezekowitz.

Jones, K. F. *See* Bessen, Jones, and Fischetti.

Jones, P. P. *See* Davis, Buerstedde, McKean, Jones, McDevitt, and Wraith.

Jong, M. T. C. *See* Wright, Levin, Jong, Chad, and Kabbash.

Jonjić, S., Mutter, W., Weiland, F., Reddehase, M. J., and Koszinowski, U. H. Site-restricted persistent cytomegalovirus infection after selective long-term depletion of $CD4^+$ T lymphocytes. 1199.

Jordan, B. R. *See* Chimini, Pala, Sire, Jordan, and Maryanski.

Juji, T. *See* Watanabe, Tokunaga, Matsuki, Takeuchi, Matsuta, Maeda, Omoto, and Juji.

K

Kabbash, L. G. *See* Wright, Levin, Jong, Chad, and Kabbash.

Kagnoff, M. F. *See* Schoenbeck, Hammen, and Kagnoff.

Kampinga, J. *See* Bolton, Gracie, Briggs, Kampinga, and Bradley.

Kanagawa, O. *See* Bill, Kanagawa, Woodland, and Palmer.

Kaplan, G., Kiessling, R., Teklemariam, S., Hancock, G., Sheftel, G., Job, C. K., Converse, P., Ottenhoff, T. H. M., Becx-Bleumink, M., Dietz, M., and Cohn, Z. A. The reconstitution of cell-mediated immunity in the cutaneous lesions of lepromatous leprosy by recombinant interleukin 2. 893.

— *See* Cooper, Mueller, Sinchaisri, Pirmez, Chan, Kaplan, Young, Weissman, Bloom, Rea, and Modlin.

— *See* Hancock, Cohn, and Kaplan.

Kappler, J. W., Kushnir, E., and Marrack, P. Analysis of Vβ17a expression in new mouse strains bearing the $V\beta^a$ haplotype. 1533.

Kasik, J. W. *See* Burke, Hirschfeld, Shirayoshi, Kasik, Hamada, Appella, and Ozato.

Kasper, D. L. *See* Wessels and Kasper.

Kaufman, Y. *See* Liu, Jiang, Persechini, Zychlinsky, Kaufman, and Young.

Kaushik, A., Schulze, D. H., Bona, C., and Kelsoe, G. Murine V_κ gene expression does not follow the VH paradigm. 1859.

Kelley, R. O. *See* Garcia-Peñarrubia, Koster, Kelley, McDowell, and Bankhurst.

Kelly, N. *See* Cross, Sadoff, Kelly, Bernton, and Gemski.

Kelsoe, G. *See* Kaushik, Schulze, Bona, and Kelsoe.

Kennedy, C. A. *See* Wong, Cahill, Rosen, Kennedy, Bonaccio, Morris, Wilson, Klickstein, and Fearon.

Kern, D. E. *See* Klarnet, Kern, Okuno, Holt, Lilly, and Greenberg.

Kersey, J. H. *See* Griesinger, Arthur, Brunning, Parkin, Ochoa, Miller, Wilkowski, Greenberg, Hurvitz, and Kersey.

Keski-Oja, J. *See* Fava, Olsen, Keski-Oja, Moses, and Pincus.

Kierulf, P. *See* Waage, Brandtzaeg, Halstensen, Kierulf, and Espevik.

Kiessling, R. *See* Kaplan, Kiessling, Teklemariam, Hancock, Sheftel, Job, Converse, Ottenhoff, Becx-Bleumink, Dietz, and Cohn.

Kindt, T. J. *See* Kulaga, Folks, Rutledge, Truckenmiller, Gugel, and Kindt.

Kingsmore, S. F., Vik, D. P., Kurtz, C. B., Leroy, P., Tack, B. F., Weis, J. H., and Seldin, M. F. Genetic organization of complement receptor-related genes in the mouse. 1479.

Kishi, H. *See* Teh, Kishi, Scott, and Von Boehmer.

Kishimoto, T. *See* Beagley, Eldridge, Lee, Kiyono, Everson, Koopman, Hirano, Kishimoto, and McGhee.

Kiyono, H. *See* Beagley, Eldridge, Lee, Kiyono, Everson, Koopman, Hirano, Kishimoto, and McGhee.

Klarnet, J. P., Kern, D. E., Okuno, K., Holt, C., Lilly, F., and Greenberg, P. D. FBL-reactive $CD8^+$ cytotoxic and $CD4^+$ helper T lymphocytes recognize distinct Friend murine leukemia virus-encoded antigens. 457.

Klavinskis, L. S. *See* Young, Klavinskis, Oldstone, and Young.

Klickstein, L. B. *See* Wong, Cahill, Rosen, Kennedy, Bonaccio, Morris, Wilson, Klickstein, and Fearon.

Kluin, Ph. M. *See* De Jong, Voetdijk, Van Ommen, Kluin-Nelemans, Beverstock, and Kluin.

Kluin-Nelemans, J. C. *See* De Jong, Voetdijk, Van Ommen, Kluin-Nelemans, Beverstock, and Kluin.

Knight, S. C. *See* Macatonia, Taylor, Knight, and Askonas.

Koch, S. *See* Momburg and Koch.

Kodama, Y. *See* Hakoda, Hirai, Shimba, Kusunoki, Kyoizumi, Kodama, and Akiyama.

Koene, R. A. P. *See* Schrijver, Schalkwijk, Robben, Assmann, and Koene.

Koide, S. *See* Romani, Koide, Crowley, Witmer-Pack, Livingstone, Fathman, Inaba, and Steinman.

Koller, B. H., Geraghty, D. E., DeMars, R., Duvick, L., Rich, S. S., and Orr, H. T. Chromosomal organization of the human major histocompatibility complex class I gene family. 469.

Konda, S. *See* Shimizu, Yoshioka, Hirose, Sugai, Tachibana, and Konda.

Koning, F. *See* Maxfield, Moulder, Koning, Elbe, Stingl, Coligan, Shevach, and Yokoyama.

Kono, D. H. *See* Clayton, Gammon, Ando, Kono, Hood, and Sercarz.

Koomey, J. M. *See* Wetzler, Gotschlich, Blake, and Koomey.

Koopman, W. J. *See* Beagley, Eldridge, Lee, Kiyono, Everson, Koopman, Hirano, Kishimoto, and McGhee.

Kornbluth, R. S., Oh, P. S., Munis, J. R., Cleveland, P. H., and Richman, D. D. Interferons and bacterial lipopolysaccharide protect macrophages from production infection by human immunodeficiency virus in vitro. 1137.

Koster, F. T. *See* Garcia-Peñarrubia, Koster, Kelley, McDowell, and Bankhurst.

Koszinowski, U. H. *See* Jonjić, Mutter, Weiland, Reddehase, and Koszinowski.

Kotake, S. *See* Sanui, Redmond, Kotake, Wiggert, Hu, Margalit, Berzofsky, Chader, and Gery.

Kozbor, D., Trinchieri, G., Monos, D. S., Isobe, M., Russo, G., Haney, J. A., Zmijewski, C., and Croce, C. M. Human TCR-γ^+/δ^+, $CD8^+$ T lymphocytes recognize tetanus toxoid in an MHC-restricted fashion. 1847.

Krangel, M. S. *See* Hata, Clabby, Devlin, Spits, De Vries, and Krangel.

Krasnow, H. *See* Chang, Moingeon, Lopez, Krasnow, Stebbins, and Reinherz.

Kraus, W., Ohyama, K., Snyder, D. S., and Beachey, E. H. Autoimmune sequence of streptococcal M protein shared with the intermediate filament protein, vimentin. 481.

Krensky, A. M. *See* Wright, Lee, Link, Smith, Carroll, Levy, Clayberger, and Krensky.

Krimpenfort, P. *See* Oudejans, Krimpenfort, Ploegh, and Meijer.

Kruisbeek, A. M. *See* Marušić-Galešić, Longo, and Kruisbeek.

— *See* Zuniga-Pflucker, McCarthy, Weston, Longo, Singer, and Kruisbeek.

Kubo, R. T. *See* Spencer and Kubo.

Kufe, D. W. *See* Brouckaert, Spriggs, Demetri, Kufe, and Fiers.

Kuhlman, M., Joiner, K., and Ezekowitz, R. A. B. The human mannose-binding protein functions as an opsonin. 1733.

— *See* Ezekowitz, Kuhlman, Groopman, and Byrn.

Kulaga, H., Folks, T., Rutledge, R., Truckenmiller, M. E., Gugel, E., and Kindt, T. J. Infection of rabbits with human immunodeficiency virus 1. A small animal model for acquired immune deficiency syndrome. 321.

Kumagai, S. *See* Noma, Nakakubo, Sugita, Kumagai, Maeda, Shimizu, and Honjo.

Kumar, B. V. *See* Bora, Lublin, Kumar, Hockett, Holers, and Atkinson.

Kuo, G. C. *See* Natanson, Eichenholz, Danner, Eichacker, Hoffman, Kuo, Banks, MacVittie, and Parrillo.

Kuramoto, A. *See* Suzuki, Miyasaka, Ota, Yamakawa, Tagawa, Kuramoto, and Mizuno.

Kurasuyama, H., Tohyama, N., and Tada, T. Autocrine growth and tumorigenicity of interleukin 2-dependent helper T cells transfected with IL-2 gene. 13.

Kuratsu, J.-I. *See* Yoshimura, Robinson, Tanaka, Appella, Kuratsu, and Leonard.

Kurtz, C. B. *See* Kingsmore, Vik, Kurtz, Leroy, Tack, Weis, and Seldin.

Kushnir, E. *See* Kappler, Kushnir, and Marrack.

Kusunoki, Y. *See* Hakoda, Hirai, Shimba, Kusunoki, Kyoizumi, Kodama, and Akiyama.

Kuwano, K., Scott, M., Young, J. F., and Ennis, F. A. Active immunization against virus infections due to antigenic drift by induction of crossreactive cytotoxic T lymphocytes. 1361.

Kwiatkowski, D. Febrile temperatures can synchronize the growth of *Plasmodium falciparum* in vitro. 357.

Kyoizumi, S. *See* Hakoda, Hirai, Shimba, Kusunoki, Kyoizumi, Kodama, and Akiyama.

L

Landais, D. *See* Pierres, Marchetto, Naquet, Landais, Peccoud, Benoist, and Mathis.

Langhoff, E., and Steinman, R. M. Clonal expansion of human T lymphocytes initiated by dendritic cells. 315.

Lanier, L. L., Testi, R., Bindl, J., and Phillips, J. H. Identity of Leu-19 (CD56) leukocyte differentiation antigen and neural cell adhesion molecule. 2233.

— *See* Groh, Porcelli, Fabbi, Lanier, Picker, Anderson, Warnke, Bhan, Strominger, and Brenner.

Larsen, C. G. *See* Matsushima, Larsen, Dubois, and Oppenheim.

Lau, L. L. *See* Bhardwaj, Lau, Friedman, Crow, and Steinman.
Lawetzky, A. *See* Hünig, Wallny, Hartley, Lawetzky, and Tiefenthaler.
Lawrence, J. B. *See* Staunton, Fisher, LeBeau, Lawrence, Barton, Francke, Dustin, and Thorley-Lawson.
LeBeau, M. M. *See* Staunton, Fisher, LeBeau, Lawrence, Barton, Francke, Dustin, and Thorley-Lawson.
Lebecque, S. G. *See* Levy, Malipiero, Lebecque, and Gearhart.
Lee, F. *See* Beagley, Eldridge, Lee, Kiyono, Everson, Koopman, Hirano, Kishimoto, and McGhee.
Lee, G. *See* Schriever, Freedman, Freeman, Messner, Lee, Daley, and Nadler.
Lee, J. E. *See* Wright, Lee, Link, Smith, Carroll, Levy, Clayberger, and Krensky.
Lee, M.-K. *See* Hameed, Olsen, Lee, Lichtenheld, and Podack.
Lees, R. K. *See* Schneider, Lees, Pedrazzini, Zinkernagel, Hengartner, and MacDonald.
Leonard, E. J. *See* Yoshimura, Robinson, Tanaka, Appella, Kuratsu, and Leonard.
Leroy, P. *See* Kingsmore, Vik, Kurtz, Leroy, Tack, Weis, and Seldin.
Letvin, N. L. *See* Tsubota, Lord, Watkins, Morimoto, and Letvin.
Leupers, C. J. M. *See* Vasmel, Sijts, Leupers, Matthews, and Melief.
Levi, R. *See* Stuehr, Gross, Sakuma, Levi, and Nathan.
Levin, S. M. *See* Lo, Detmers, Levin, and Wright.
— *See* Wright, Levin, Jong, Chad, and Kabbash.
Levy, E., Lopez-Otin, C., Ghiso, J., Geltner, D., and Frangione, B. Stroke in Icelandic patients with hereditary amyloidangiopathy is related to a mutation in the cystatin C gene, an inhibitor of cysteine proteases. 1771.
Levy, N. S., Malipiero, U. V., Lebecque, S. G., and Gearhart, P. J. Early onset of somatic mutation in immunoglobulin VH genes during the primary immune response. 2007.
Levy, R. *See* Wright, Lee, Link, Smith, Carroll, Levy, Clayberger, and Krensky.
Li, H., Schwinzer, R., Baccarini, M., and Lohmann-Matthes, M.-L. Cooperative effects of colony-stimulating factor 1 and recombinant interleukin 2 on proliferation and induction of cytotoxicity of macrophage precursors generated from mouse bone marrow cell cultures. 973.
Li, X. *See* Burns, Li, Shen, Offner, Chou, Vandenbark, and Heber-Katz.
Lichtenheld, M. G. *See* Hameed, Olsen, Lee, Lichtenheld, and Podack.
Lichtman, S. M. *See* Sthoeger, Wakai, Tse, Vinciguerra, Allen, Budman, Lichtman, Schulman, Weiselberg, and Chiorazzi.
Lilly, F. *See* Klarnet, Kern, Okuno, Holt, Lilly, and Greenberg.
Link, M. P. *See* Wright, Lee, Link, Smith, Carroll, Levy, Clayberger, and Krensky.
Linsk, R., Watts, S., Fischer, A., and Goodenow, R. S. The tumor-rejection antigens of the 1591 ultraviolet fibrosarcoma.Potential origin and evolutionary implications. 1043.
Litwin, S. *See* Silberstein, Litwin, and Carmack.
Liu, C.-C., Jiang, S., Persechini, P. M., Zychlinsky, A., Kaufman, Y., and Young, J. D.-E Resistance of cytolytic lymphocytes to perforin-mediated killing.Induction of resistance correlates with increase in cytotoxicity. 2211.
Livingstone, A. M. *See* Romani, Koide, Crowley, Witmer-Pack, Livingstone, Fathman, Inaba, and Steinman.
Lloyd, K. O. *See* Furukawa, Furukawa, Real, Old, and Lloyd.
Lo, D. *See* Hagman, Lo, Doglio, Hackett, Rudin, Haasch, Brinster, and Storb.
Lo, S. K., Detmers, P. A., Levin, S. M., and Wright, S. D. Transient adhesion of neutrophils to endothelium. 1779.
Locke, A. L. *See* Mercolino, Locke, Afshari, Sasser, Travis, Arnold, and Haughton.
Locksley, R. M. *See* Heinzel, Sadick, Holaday, Coffman, and Locksley.
Lohmann-Matthes, M.-L. *See* Li, Schwinzer, Baccarini, and Lohmann-Matthes.
Longo, D. L. *See* Marušić-Galešić, Longo, and Kruisbeek.
— *See* Zuniga-Pflucker, McCarthy, Weston, Longo, Singer, and Kruisbeek.
Lopez, P. *See* Chang, Moingeon, Lopez, Krasnow, Stebbins, and Reinherz.
Lopez-Otin, C. *See* Levy, Lopez-Otin, Ghiso, Geltner, and Frangione.
Lord, C. I. *See* Tsubota, Lord, Watkins, Morimoto, and Letvin.
Lotteau, V., Sands, J., Teyton, L., Turmel, P., Charron, D., and Strominger, J. L. Modulation of HLA class II antigen expression by transfection of sense and antisense DRα cDNA. 351.
Loudon, R. *See* Cuturi, Anegón, Sherman, Loudon, Clark, Perussia, and Trinchieri.
Lublin, D. M. *See* Bora, Lublin, Kumar, Hockett, Holers, and Atkinson.
Lucey, D. R., Dorsky, D. I., Nicholson-Weller, A., and Weller, P. F. Human eosinophils express CD4 protein and bind human immunodeficiency virus 1 gp120. 327.
Lupton, S. *See* Morrissey, Goodwin, Nordan, Anderson, Grabstein, Cosman, Sims, Lupton, Acres, Reed, Mochizuki, Eisenman, Conlon, and Namen.
Lyng, K. *See* Morrison, Lyng, and Caldwell.

M

Macatonia, S. E., Taylor, P. M., Knight, S. C., and Askonas, B. A. Primary stimulation by dendritic cells induces antiviral proliferative and cytotoxic T cell responses in vitro. 1255.
MacDonald, H. R. *See* Schneider, Lees, Pedrazzini, Zinkernagel, Hengartner, and MacDonald.
MacKenzie, T., and Dosch, H.-M. Clonal and molecular characteristics of the human IgE-committed B cell subset. 407.

MacPhee, I. A. M., Antoni, F. A., and Mason, D. W. Spontaneous recovery of rats from experimental allergic encephalomyelitis is dependent on regulation of the immune system by endogenous adrenal corticosteroids. 431.

MacVittie, T. J. *See* Natanson, Eichenholz, Danner, Eichacker, Hoffman, Kuo, Banks, MacVittie, and Parrillo.

Maeda, H. *See* Watanabe, Tokunaga, Matsuki, Takeuchi, Matsuta, Maeda, Omoto, and Juji.

Maeda, M. *See* Noma, Nakakubo, Sugita, Kumagai, Maeda, Shimizu, and Honjo.

Mak, T. W. *See* Takihara, Reimann, Michalopoulos, Ciccone, Moretta, and Mak.

Malipiero, U. V. *See* Levy, Malipiero, Lebecque, and Gearhart.

Marchetto, S. *See* Pierres, Marchetto, Naquet, Landais, Peccoud, Benoist, and Mathis.

Margalit, H. *See* Sanui, Redmond, Kotake, Wiggert, Hu, Margalit, Berzofsky, Chader, and Gery.

Markussen, G. *See* Sollid, Markussen, Ek, Gjerde, Vartdal, and Thorsby.

Marrack, P. *See* Kappler, Kushnir, and Marrack.

Marušić-Galešić, S., Longo, D. L., and Kruisbeek, A. M. Preferential differentiation of T cell receptor specificities based on the MHC glycoproteins encountered during development. Evidence for positive selection. 1619.

Maryanski, J. L. *See* Chimini, Pala, Sire, Jordan, and Maryanski.

Mason, D. W. *See* MacPhee, Antoni, and Mason.

Mason, D. *See* Powrie and Mason.

Mathis, D. *See* Pierres, Marchetto, Naquet, Landais, Peccoud, Benoist, and Mathis.

Matsuki, K. *See* Watanabe, Tokunaga, Matsuki, Takeuchi, Matsuta, Maeda, Omoto, and Juji.

Matsushima, K., Larsen, C. G., Dubois, G. C., and Oppenheim, J. J. Purification and characterization of a novel monocyte chemotactic and activating factor produced by a human myelomonocytic cell line. 1485.

— *See* Samanta, Oppenheim, and Matsushima.

Matsuta, K. *See* Watanabe, Tokunaga, Matsuki, Takeuchi, Matsuta, Maeda, Omoto, and Juji.

Matthews, E. A. *See* Vasmel, Sijts, Leupers, Matthews, and Melief.

Maxfield, S. R., Moulder, K., Koning, F., Elbe, A., Stingl, G., Coligan, J. E., Shevach, E. M., and Yokoyama, W. M. Murine T cells express a cell surface receptor for multiple extracellular matrix proteins. Identification and characterization with monoclonal antibodies. 2173.

Mayumi, H., and Good, R. A. Long-lasting skin allograft tolerance in adult mice induced across fully allogeneic (multimajor H-2 plus multiminor histocompatibility) antigen barriers by a tolerance-inducing method using cyclophosphamide. 213.

McCarthy, S. A. *See* Zuniga-Pflucker, McCarthy, Weston, Longo, Singer, and Kruisbeek.

McDevitt, H. O. *See* Davis, Buerstedde, McKean, Jones, McDevitt, and Wraith.

McDonald, J. A. *See* Holers, Ruff, Parks, McDonald, Ballard, and Brown.

McDowell, T. D. *See* Garcia-Peñarrubia, Koster, Kelley, McDowell, and Bankhurst.

McGhee, J. R. *See* Beagley, Eldridge, Lee, Kiyono, Everson, Koopman, Hirano, Kishimoto, and McGhee.

McKean, D. J. *See* Buerstedde, Nilson, Chase, Bell, Beck, Pease, and McKean.

— *See* Davis, Buerstedde, McKean, Jones, McDevitt, and Wraith.

— *See* Ten, Pease, McKean, Bell, and Gleich.

Meek, K., Hasemann, C., Pollok, B., Alkan, S. S., Brait, M., Slaoui, M., Urbain, J., and Capra, J. D. Structural characterization of antiidiotypic antibodies. Evidence that Ab2s are derived from the germline differently that Abls. 519.

Meek, R. L. *See* Benditt and Meek.

Meeuwsen, T. *See* Van Denderen, Hermans, Meeuwsen, Troelstra, Zegers, Boersma, Grosveld, and Van Ewijk.

Meijer, C. J. L. M. *See* Oudejans, Krimpenfort, Ploegh, and Meijer.

Melchers, F. *See* Rolink, Melchers, and Palacios.

Melief, C. J. M. *See* Vasmel, Sijts, Leupers, Matthews, and Melief.

Mercolino, T. J., Locke, A. L., Afshari, A., Sasser, D., Travis, W. W., Arnold, L. W., and Haughton, G. Restricted immunoglobulin variable region gene usage by normal Ly-1 ($CD5^+$) B cells that recognize phosphatidyl choline. 1869.

Mercurio, A. M. *See* Shaw and Mercurio.

Messner, E. *See* Schriever, Freedman, Freeman, Messner, Lee, Daley, and Nadler.

Metlay, J. P., Puré, E., and Steinman, R. M. Distinct features of dendritic cells and anti-Ig activated B cells as stimulators of the primary mixed leukocyte reaction. 239.

Michalopoulos, E. *See* Takihara, Reimann, Michalopoulos, Ciccone, Moretta, and Mak.

Miller, G. G., Hoy, J. F., and Thomas, J. W. Insulin B chain functions as an effective competitor of antigen presentation via peptide homologies present in the thymus. 2251.

Miller, W. J. *See* Griesinger, Arthur, Brunning, Parkin, Ochoa, Miller, Wilkowski, Greenberg, Hurvitz, and Kersey.

Mills, C. D. *See* Albina, Caldwell, Henry, and Mills.

Milon, G. *See* Rosen, Milon, and Gordon.

Mitsuya, H. *See* Perno, Yarchoan, Cooney, Hartman, Webb, Hao, Mitsuya, Johns, and Broder.

Miyasaka, H. *See* Suzuki, Miyasaka, Ota, Yamakawa, Tagawa, Kuramoto, and Mizuno.

Mizuno, S. *See* Suzuki, Miyasaka, Ota, Yamakawa, Tagawa, Kuramoto, and Mizuno.

Mochizuki, D. *See* Morrissey, Goodwin, Nordan, Anderson, Grabstein, Cosman, Sims, Lupton, Acres, Reed, Mochizuki, Eisenman, Conlon, and Namen.

Modlin, R. L. *See* Cooper, Mueller, Sinchaisri, Pirmez, Chan, Kaplan, Young, Weissman, Bloom, Rea, and Modlin.

Moingeon, P. *See* Chang, Moingeon, Lopez, Krasnow, Stebbins, and Reinherz.

Momburg, F., and Koch, S. Selective loss of β_2-microglobulin mRNA in human colon carcinoma. 309.

Monos, D. S. *See* Kozbor, Trinchieri, Monos, Isobe, Russo, Haney, Zmijewski, and Croce.

Monroe, J. G., Seyfert, V. L., Owen, C. S., and Sykes, N. Isolation and characterization of a B lymphocyte mutant with altered signal transduction through its antigen receptor. 1059.

Montagnier, L. *See* Fenouillet, Clerget-Raslain, Gluckman, Guétard, Montagnier, and Bahraoui.

Moretta, L. *See* Takihara, Reimann, Michalopoulos, Ciccone, Moretta, and Mak.

Morimoto, C. *See* Tsubota, Lord, Watkins, Morimoto, and Letvin.

Morishita, K. *See* Weinstein, Morishita, Cleveland, and Ihle.

Moritz, R. L. *See* Van Snick, Goethals, Renauld, Van Roost, Uyttenhove, Rubira, Moritz, and Simpson.

Morris, D. G., and Pross, H. F. Studies of lymphokine-activated killer (LAK) cells.I. Evidence using novel monoclonal antibodies that most human LAK precursor cells share a common surface marker. 717.

Morris, M. J. *See* Wong, Cahill, Rosen, Kennedy, Bonaccio, Morris, Wilson, Klickstein, and Fearon.

Morrison, R. P., Lyng, K., and Caldwell, H. D. Chlamydial disease pathogenesis.Ocular hypersensitivity elicited by a genus-specific 57-kD protein. 663.

Morrissey, P. J., Goodwin, R. G., Nordan, R. P., Anderson, D., Grabstein, K. H., Cosman, D., Sims, J., Lupton, S., Acres, B., Reed, S. G., Mochizuki, D., Eisenman, J., Conlon, P. J., and Namen, A. E. Recombinant interleukin 7, pre-B cell growth factor, has costimulatory activity on purified mature T cells. 707.

Morse, S. S., and Valinsky, J. E. Mouse thymic virus (MTLV).A mammalian herpesvirus cytolytic for $CD4^+$ ($L3T4^+$) T lymphocytes. 591.

Moses, H. *See* Fava, Olsen, Keski-Oja, Moses, and Pincus.

Moulder, K. *See* Maxfield, Moulder, Koning, Elbe, Stingl, Coligan, Shevach, and Yokoyama.

Mueller, C. *See* Cooper, Mueller, Sinchaisri, Pirmez, Chan, Kaplan, Young, Weissman, Bloom, Rea, and Modlin.

Muhly, M. *See* Bhakdi, Greulich, Muhly, Eberspächer, Becker, Thiele, and Hugo.

Mukherji, B., Guha, A., Chakraborty, N. G., Sivanandham, M., Nashed, A. L., and Ergin, M. T. Clonal analysis of cytotoxic and regulatory T cell responses against human melanoma. 1961.

Muller, S. *See* Plaué, Muller, and Van Regenmortel.

Munis, J. R. *See* Kornbluth, Oh, Munis, Cleveland, and Richman.

Mutter, W. *See* Jonjić, Mutter, Weiland, Reddehase, and Koszinowski.

N

Nadler, L. M. *See* Schriever, Freedman, Freeman, Messner, Lee, Daley, and Nadler.

Nagata, K. *See* Takeshita, Goto, Tada, Nagata, Asao, and Sugamura.

Nakakubo, H. *See* Noma, Nakakubo, Sugita, Kumagai, Maeda, Shimizu, and Honjo.

Nakamura, S., Sung, S.-S. J., Bjorndahl, J. M., and Fu, S. M. Human T cell activation.IV. T cell activation and proliferation via the early activation antigen EA 1. 677.

Namen, A. E. *See* Morrissey, Goodwin, Nordan, Anderson, Grabstein, Cosman, Sims, Lupton, Acres, Reed, Mochizuki, Eisenman, Conlon, and Namen.

Nanus, D. M., Ebrahim, S. A. D., Bander, N. H., Real, F. X., Pfeffer, L. M., Shapiro, J. R., and Albino, A. P. Transformation of human kidney proximal tubule cells by *ras*-containing retroviruses.Implications for tumor progression. 953.

Naquet, P. *See* Pierres, Marchetto, Naquet, Landais, Peccoud, Benoist, and Mathis.

Nashed, A. L. *See* Mukherji, Guha, Chakraborty, Sivanandham, Nashed, and Ergin.

Natanson, C., Eichenholz, P. W., Danner, R. L., Eichacker, P. Q., Hoffman, W. D., Kuo, G. C., Banks, S. M., MacVittie, T. J., and Parrillo, J. E. Endotoxin and tumor necrosis factor challenges in dogs simulate the cardiovascular profile of human septic shock. 823.

Nathan, C. F. *See* Stuehr and Nathan.

— *See* Stuehr, Gross, Sakuma, Levi, and Nathan.

Nawroth, P. *See* Brett, Gerlach, Nawroth, Steinberg, Godman, and Stern.

Nelson, F. B. *See* Diamond, Nelson, and Reinherz.

Nichols, M. E. *See* Barnwell, Nichols, and Rubinstein.

Nicholson-Weller, A. *See* Lucey, Dorsky, Nicholson-Weller, and Weller.

Nickerson, K. G., Berman, J., Glickman, E., Chess, L., and Alt, F. W. Early human IgH gene assembly in Epstein-Barr virus–transformed fetal B cell lines. Preferential utilization of the most JH-proximal D segments (DQ52) and two unusual VH-related rearrangements. 1391.

Nilson, A. E. *See* Buerstedde, Nilson, Chase, Bell, Beck, Pease, and McKean.

Nixon, J. C. *See* Remold-O'Donnell, Nixon, and Rose.

Noma, T., Nakakubo, H., Sugita, M., Kumagai, S., Maeda, M., Shimizu, A., and Honjo, T. Expression of different combinations of interleukins by human T cell leukemic cell lines that are clonally related. 1853.

Nordan, R. P. *See* Morrissey, Goodwin, Nordan, Anderson, Grabstein, Cosman, Sims, Lupton, Acres, Reed, Mochizuki, Eisenman, Conlon, and Namen.

North, R. J. *See* Hill, Awwad, and North.

Nussenzweig, V. *See* Iida, Whitlow, and Nussenzweig.

O

Ochoa, A. C. *See* Griesinger, Arthur, Brunning, Parkin, Ochoa, Miller, Wilkowski, Greenberg, Hurvitz, and Kersey.

Offner, H. *See* Burns, Li, Shen, Offner, Chou, Vandenbark, and Heber-Katz.

Oh, P. S. *See* Kornbluth, Oh, Munis, Cleveland, and Richman.

Ohyama, K. *See* Kraus, Ohyama, Snyder, and Beachey.

Okada, C. Y., and Weissman, I. L. Relative Vβ transcript levels in thymus and peripheral lymphoid tissues from various mouse strains. Inverse correlation of I-E and Mls expression with relative abundance of several Vβ transcripts in peripheral lymphoid tissues. 1703.

Okamoto, A. *See* Webb, Okamoto, Ron, and Sprent.

Okuno, K. *See* Klarnet, Kern, Okuno, Holt, Lilly, and Greenberg.

Old, L. J. *See* Furukawa, Furukawa, Real, Old, and Lloyd.

Oldstone, M. B. A. *See* Young, Klavinskis, Oldstone, and Young.

Olive, D. *See* Dustin, Olive, and Springer.

Olsen, K. J. *See* Hameed, Olsen, Lee, Lichtenheld, and Podack.

Olsen, N. *See* Fava, Olsen, Keski-Oja, Moses, and Pincus.

Olszowy, M. W. *See* Chambers, Vujanovic, DeLeo, Olszowy, Herberman, and Hiserodt.

OMalley, G. *See* Andrews, Gönczöl, Fenderson, Holmes, OMalley, Hakomori, and Plotkin.

Omoto, K. *See* Watanabe, Tokunaga, Matsuki, Takeuchi, Matsuta, Maeda, Omoto, and Juji.

Oppenheim, J. J. *See* Matsushima, Larsen, Dubois, and Oppenheim.

— *See* Samanta, Oppenheim, and Matsushima.

Orr, H. T. *See* Koller, Geraghty, DeMars, Duvick, Rich, and Orr.

Ota, H. *See* Suzuki, Miyasaka, Ota, Yamakawa, Tagawa, Kuramoto, and Mizuno.

Ottenhoff, T. H. M. *See* Kaplan, Kiessling, Teklemariam, Hancock, Sheftel, Job, Converse, Ottenhoff, Becx-Bleumink, Dietz, and Cohn.

Oudejans, C. B. M., Krimpenfort, P., Ploegh, H. L., and Meijer, C. J. L. M. Lack of expression of HLA-B27 gene in transgenic mouse trophoblast.Conserved genetic pressures underlying extraembryonic development. 447.

Owen, C. S. *See* Monroe, Seyfert, Owen, and Sykes.

Ozato, K. *See* Burke, Hirschfeld, Shirayoshi, Kasik, Hamada, Appella, and Ozato.

P

Pala, P. *See* Chimini, Pala, Sire, Jordan, and Maryanski.

Palacios, R. *See* Rolink, Melchers, and Palacios.

Palmer, E. *See* Bill, Kanagawa, Woodland, and Palmer.

— *See* Bill, Yagüe, Appel, White, Horn, Erlich, and Palmer.

Parkin, J. L. *See* Griesinger, Arthur, Brunning, Parkin, Ochoa, Miller, Wilkowski, Greenberg, Hurvitz, and Kersey.

Parks, D. L. *See* Holers, Ruff, Parks, McDonald, Ballard, and Brown.

Parrillo, J. E. *See* Natanson, Eichenholz, Danner, Eichacker, Hoffman, Kuo, Banks, MacVittie, and Parrillo.

Peace, D. J., and Cheever, M. A. Toxicity and therapeutic efficacy of high-dose interleukin 2. In vivo infusion of antibody to NK-1.1 attenuates toxicity without compromising efficacy against murine leukemia. 161.

Pease, L. R. *See* Buerstedde, Nilson, Chase, Bell, Beck, Pease, and McKean.

— *See* Ten, Pease, McKean, Bell, and Gleich.

Peccoud, J. *See* Pierres, Marchetto, Naquet, Landais, Peccoud, Benoist, and Mathis.

Pedrazzini, T. *See* Schneider, Lees, Pedrazzini, Zinkernagel, Hengartner, and MacDonald.

Perlmann, P. *See* Udomsangpetch, Wahlin, Carlson, Berzins, Torii, Aikawa, Perlmann, and Wahlgren.

Perno, C.-F., Yarchoan, R., Cooney, D. A., Hartman, N. R., Webb, D. S. A., Hao, Z., Mitsuya, H., Johns, D. G., and Broder, S. Replication of human immunodeficiency virus in monocytes. Granulocyte/macrophage colony-stimulating factor (GM-CSF) potentiates viral production yet enhances the antiviral effect mediated by 3′-azido-2′3′-dideoxythymidine (AZT) and other dideoxynucleoside congeners of thymidine. 933.

Persechini, P. M. *See* Liu, Jiang, Persechini, Zychlinsky, Kaufman, and Young.

Perussia, B. *See* Cassatella, Anegón, Cuturi, Griskey, Trinchieri, and Perussia.

— *See* Cuturi, Anegón, Sherman, Loudon, Clark, Perussia, and Trinchieri.

Pfeffer, L. M. *See* Nanus, Ebrahim, Bander, Real, Pfeffer, Shapiro, and Albino.

Phillips, J. H. *See* Lanier, Testi, Bindl, and Phillips.

Picker, L. J. *See* Groh, Porcelli, Fabbi, Lanier, Picker, Anderson, Warnke, Bhan, Strominger, and Brenner.

Pierres, M., Marchetto, S., Naquet, P., Landais, D., Peccoud, J., Benoist, C., and Mathis, D. I-Aα polymorphic residues that determine alloreactive T cell recognition. 1655.

Pincus, T. *See* Fava, Olsen, Keski-Oja, Moses, and Pincus.

Pirmez, C. *See* Cooper, Mueller, Sinchaisri, Pirmez, Chan, Kaplan, Young, Weissman, Bloom, Rea, and Modlin.

Plaué, S., Muller, S., and Van Regenmortel, M. H. V. A branched, synthetic octapeptide of ubiquitinated histone H2A as target of autoantibodies. 1607.

Ploegh, H. L. *See* Oudejans, Krimpenfort, Ploegh, and Meijer.

Plotkin, S. *See* Andrews, Gönczöl, Fenderson, Holmes, OMalley, Hakomori, and Plotkin.

Podack, E. R. *See* Hameed, Olsen, Lee, Lichtenheld, and Podack.

Pollok, B. A. *See* Anker, Conley, and Pollok.

Pollok, B. *See* Meek, Hasemann, Pollok, Alkan, Brait, Slaoui, Urbain, and Capra.

Porcelli, S. *See* Groh, Porcelli, Fabbi, Lanier, Picker, Anderson, Warnke, Bhan, Strominger, and Brenner.

Portis, J. L. *See* Buller, Van Zant, Eldridge, and Portis.

Powrie, F., and Mason, D. The MRC OX-22- $CD4^+$ T cells that help B cells in secondary immune responses derive from naive precursors with the MRC $OX\text{-}22^+$ $CD4^+$ phenotype. 653.

Pross, H. F. *See* Morris and Pross.

Puré, E. *See* Metlay, Pure, and Steinman.

— *See* Romani, Inaba, Puré, Crowley, Witmer-Pack, and Steinman.

Q

Qin, S., Cobbold, S., Benjamin, R., and Waldmann, H. Induction of classical transplantation tolerance in the adult. 779.

Quakyi, I. A. *See* Carter, Graves, Quakyi, and Good.

R

Rampart, M., De Smet, W., Fiers, W., and Herman, A. G. Inflammatory properties of recombinant tumor necrosis factor in rabbit skin in vivo. 2227.

Rappuoli, R. *See* De Magistris, Romano, Bartoloni, Rappuoli, and Tagliabue.

Ratnofsky, S. *See* Rosenstein, Ratnofsky, Burakoff, and Herrmann.

Rea, T. H. *See* Cooper, Mueller, Sinchaisri, Pirmez, Chan, Kaplan, Young, Weissman, Bloom, Rea, and Modlin.

Real, F. X. *See* Furukawa, Furukawa, Real, Old, and Lloyd.

— *See* Nanus, Ebrahim, Bander, Real, Pfeffer, Shapiro, and Albino.

Reddehase, M. J. *See* Jonjić, Mutter, Weiland, Reddehase, and Koszinowski.

Redmond, T. M. *See* Sanui, Redmond, Kotake, Wiggert, Hu, Margalit, Berzofsky, Chader, and Gery.

Reed, S. G. *See* Morrissey, Goodwin, Nordan, Anderson, Grabstein, Cosman, Sims, Lupton, Acres, Reed, Mochizuki, Eisenman, Conlon, and Namen.

Reimann, J. *See* Takihara, Reimann, Michalopoulos, Ciccone, Moretta, and Mak.

Reinherz, E. L. *See* Chang, Moingeon, Lopez, Krasnow, Stebbins, and Reinherz.

— *See* Diamond, Nelson, and Reinherz.

— *See* Sayre, Hussey, Chang, Ciardelli, and Reinherz.

Remold-O'Donnell, E., Nixon, J. C., and Rose, R. M. Elastase inhibitor.Characterization of the human elastase inhibitor molecule associated with monocytes, macrophages, and neutrophils. 1071.

Renauld, J.-C. *See* Van Snick, Goethals, Renauld, Van Roost, Uyttenhove, Rubira, Moritz, and Simpson.

Reynolds, T. C. *See* Tycko, Reynolds, Smith, and Sklar.

Rich, S. S. *See* Koller, Geraghty, DeMars, Duvick, Rich, and Orr.

Richman, D. D. *See* Kornbluth, Oh, Munis, Cleveland, and Richman.

Robben, J. C. M. *See* Schrijver, Schalkwijk, Robben, Assmann, and Koene.

Robinson, E. A. *See* Yoshimura, Robinson, Tanaka, Appella, Kuratsu, and Leonard.

Rolink, A. G., Melchers, F., and Palacios, R. Monoclonal antibodies reactive with the mouse interleukin 5 receptor. 1693.

Romani, N., Inaba, K., Puré, E., Crowley, M., Witmer-Pack, M., and Steinman, R. M. A small number of anti-CD3 molecules on dendritic cells stimulate DNA synthesis in mouse T lymphocytes. 1153.

—, Koide, S., Crowley, M., Witmer-Pack, M., Livingstone, A. M., Fathman, C. G., Inaba, K., and Steinman, R. M. Presentation of exogenous protein antigens by dendritic cells to T cell clones. Intact protein is presented best by immature, epidermal Langerhans cells. 1169.

Romano, M. *See* De Magistris, Romano, Bartoloni, Rappuoli, and Tagliabue.

Ron, Y. *See* Webb, Okamoto, Ron, and Sprent.

Rose, R. M. *See* Remold-O'Donnell, Nixon, and Rose.

Rosen, H., Milon, G., and Gordon, S. Antibody to the murine type 3 complement receptor inhibits T lymphocyte–dependent recruitment of myelomonocytic cells in vivo. 535.

Rosen, M. D. *See* Wong, Cahill, Rosen, Kennedy, Bonaccio, Morris, Wilson, Klickstein, and Fearon.

Rosenstein, Y., Ratnofsky, S., Burakoff, S. J., and Herrmann, S. H. Direct evidence for binding of CD8 to HLA class I antigens. 149.

Rubinstein, P. *See* Barnwell, Nichols, and Rubinstein.

Rubira, M. R. *See* Van Snick, Goethals, Renauld, Van Roost, Uyttenhove, Rubira, Moritz, and Simpson.

Rudin, C. M. *See* Hagman, Lo, Doglio, Hackett, Rudin, Haasch, Brinster, and Storb.

Ruff, T. G. *See* Holers, Ruff, Parks, McDonald, Ballard, and Brown.

Russo, G. *See* Kozbor, Trinchieri, Monos, Isobe, Russo, Haney, Zmijewski, and Croce.

Rutledge, R. *See* Kulaga, Folks, Rutledge, Truckenmiller, Gugel, and Kindt.

S

Sachs, D. H. *See* Sharabi and Sachs.

Sadick, M. D. *See* Heinzel, Sadick, Holaday, Coffman, and Locksley.

Sadoff, J. C. *See* Cross, Sadoff, Kelly, Bernton, and Gemski.

Saito, I., Servenius, B., Compton, T., and Fox, R. I. Detection of Epstein-Barr virus DNA by polymerase chain reaction in blood and tissue biopsies from patients with Sjogren's syndrome. 2191.

Sakuma, I. *See* Stuehr, Gross, Sakuma, Levi, and Nathan.

Samanta, A. K., Oppenheim, J. J., and Matsushima, K. Identification and characterization of specific receptors for monocyte-derived neutrophil chemotactic factor (MDNCF) on human neutrophils. 1185.

Sanders, V. M. *See* Fernandez-Botran, Sanders, and Vitetta.

Sands, J. *See* Lotteau, Sands, Teyton, Turmel, Charron, and Strominger.

Sanui, H., Redmond, T. M., Kotake, S., Wiggert, B., Hu, L.-H., Margalit, H., Berzofsky, J. A., Chader, G. J., and Gery, I. Identification of an immunodominant and highly immunopathogenic determinant in the retinal interphotoreceptor retinoid-binding protein (IRBP). 1947.

Sargent, C. A. *See* Dunham, Sargent, Dawkins, and Campbell.

Sasser, D. *See* Mercolino, Locke, Afshari, Sasser, Travis, Arnold, and Haughton.

Sayre, P. H., Hussey, R. E., Chang, H.-C., Ciardelli, T. L., and Reinherz, E. L. Structural and binding analysis of a two domain extracellular CD2 molecule. 995.

Schalkwijk, J. *See* Schrijver, Schalkwijk, Robben, Assmann, and Koene.

Schmiedeke, T. M. J., Stöckl, F. W., Weber, R., Sugisaki, Y., Batsford, S. R., and Vogt, A. Histones have high affinity for the glomerular basement membrane. Relevance for immune complex formation in lupus nephritis. 1879.

Schneider, R., Lees, R. K., Pedrazzini, T., Zinkernagel, R. M., Hengartner, H., and MacDonald, H. R. Postnatal disappearance of self-reactive ($V_{\beta 6+}$) cells from the thymus of Mls^a mice. Implications for T cell development and autoimmunity. 2149.

Schoenbeck, S., Hammen, M. J., and Kaufoff, M. F. *Vicia villosa* agglutinin separates freshly isolated Peyer's patch T cells into interleukin 5- or interleukin 2-producing subsets. 1491.

Schriever, F., Freedman, A. S., Freeman, G., Messner, E., Lee, G., Daley, J., and Nadler, L. M. Isolated human follicular dendritic cells display a unique antigenic phenotype. 2043.

Schrijver, G., Schalkwijk, J., Robben, J. C. M., Assmann, K. J. M., and Koene, R. A. P. Anti-glomerular basement membrane nephritis in beige mice.Deficiency of leukocytic neutral proteinases prevents the induction of albuminuria in the heterologous phase. 1435.

Schulman, P. *See* Sthoeger, Wakai, Tse, Vinciguerra, Allen, Budman, Lichtman, Schulman, Weiselberg, and Chiorazzi.

Schulze, D. H. *See* Kaushik, Schulze, Bona, and Kelsoe.

Schwinzer, R. *See* Li, Schwinzer, Baccarini, and Lohmann-Matthes.

Scott, B. *See* Teh, Kishi, Scott, and Von Boehmer.

Scott, M. *See* Kuwano, Scott, Young, and Ennis.

Seed, B. *See* Classon, Williams, Willis, Seed, and Stamenkovic.

Seldin, M. F. *See* Kingsmore, Vik, Kurtz, Leroy, Tack, Weis, and Seldin.

Sercarz, E. E. *See* Clayton, Gammon, Ando, Kono, Hood, and Sercarz.

Servenius, B. *See* Saito, Servenius, Compton, and Fox.

Seyfert, V. L. *See* Monroe, Seyfert, Owen, and Sykes.

Shapiro, J. R. *See* Nanus, Ebrahim, Bander, Real, Pfeffer, Shapiro, and Albino.

Sharabi, Y., and Sachs, D. H. Mixed chimerism and permanent specific transplantation tolerance induced by a nonlethal preparative regimen. 493.

Shaw, L. M., and Mercurio, A. M. Interferon γ and lipopolysaccharide promote macrophage adherence to basement membrane glycoproteins. 303.

Sheftel, G. *See* Kaplan, Kiessling, Teklemariam, Hancock, Sheftel, Job, Converse, Ottenhoff, Becx-Bleumink, Dietz, and Cohn.

Shen, N. *See* Burns, Li, Shen, Offner, Chou, Vandenbark, and Heber-Katz.

Sherman, F. *See* Cuturi, Anegón, Sherman, Loudon, Clark, Perussia, and Trinchieri.

Shevach, E. M. *See* Maxfield, Moulder, Koning, Elbe, Stingl, Coligan, Shevach, and Yokoyama.

Shimba, H. *See* Hakoda, Hirai, Shimba, Kusunoki, Kyoizumi, Kodama, and Akiyama.

Shimizu, A. *See* Noma, Nakakubo, Sugita, Kumagai, Maeda, Shimizu, and Honjo.

Shimizu, S., Yoshioka, R., Hirose, Y., Sugai, S., Tachibana, J., and Konda, S. Establishment of two interleukin 6 (B cell stimulatory factor 2/interferon β_2)-dependent human bone marrow-derived myeloma cell lines. 339.

Shirayoshi, Y. *See* Burke, Hirschfeld, Shirayoshi, Kasik, Hamada, Appella, and Ozato.

Sijts, E. J. A. M. *See* Vasmel, Sijts, Leupers, Matthews, and Melief.

Silberstein, L. E., Litwin, S., and Carmack, C. E. Relationship of variable region genes expressed by a human B cell lymphoma secreting pathologic anti-PR_2 erythrocyte autoantibodies. 1631.

Simmons, A. H-2-linked genes influence the severity of herpes simplex virus infection of the peripheral nervous system. 1503.

Simmons, R. L. *See* Billiar, Curran, Stuehr, West, Bentz, and Simmons.

Simpson, R. J. *See* Van Snick, Goethals, Renauld, Van Roost, Uyttenhove, Rubira, Moritz, and Simpson.

Sims, J. *See* Morrissey, Goodwin, Nordan, Anderson, Grabstein, Cosman, Sims, Lupton, Acres, Reed, Mochizuki, Eisenman, Conlon, and Namen.

Sinchaisri, T.-A. *See* Cooper, Mueller, Sinchaisri, Pirmez, Chan, Kaplan, Young, Weissman, Bloom, Rea, and Modlin.

Singer, A. *See* Zuniga-Pflucker, McCarthy, Weston, Longo, Singer, and Kruisbeek.

Singer, J. W. *See* Andrews, Singer, and Bernstein.

Singleton, D. K. *See* Hart, Vitti, Burgess, Singleton, and Hamilton.

Sire, J. *See* Chimini, Pala, Sire, Jordan, and Maryanski.

Sivanandham, M. *See* Mukherji, Guha, Chakraborty, Sivanandham, Nashed, and Ergin.

Sklar, J. *See* Tycko, Reynolds, Smith, and Sklar.

Slaoui, M. *See* Meek, Hasemann, Pollok, Alkan, Brait, Slaoui, Urbain, and Capra.

Smith, S. D. *See* Tycko, Reynolds, Smith, and Sklar.
— *See* Wright, Lee, Link, Smith, Carroll, Levy, Clayberger, and Krensky.

Snyder, D. S. *See* Kraus, Ohyama, Snyder, and Beachey.

Sollid, L. M., Markussen, G., Ek, J., Gjerde, H., Vartdal, F., and Thorsby, E. Evidence for a primary association of celiac response to a particular HLA-DQ α/β heterodimer. 345.

Spencer, J. S., and Kubo, R. T. Mixed isotype class II antigen expression.A novel class II molecule is expressed on a murine B cell lymphoma. 625.

Spits, H. *See* Hata, Clabby, Devlin, Spits, De Vries, and Krangel.

Sprent, J. *See* Webb, Okamoto, Ron, and Sprent.

Spriggs, D. R. *See* Brouckaert, Spriggs, Demetri, Kufe, and Fiers.

Springer, T. A. *See* Dustin, Olive, and Springer.

Stamenkovic, I. *See* Classon, Williams, Willis, Seed, and Stamenkovic.

Staunton, D. E., Fisher, R. C., LeBeau, M. M., Lawrence, J. B., Barton, D. E., Francke, U., Dustin, M., and Thorley-Lawson, D. A. Blast-1 possesses a glycosyl-phosphatidylinositol (GPI) membrane anchor, is related to LFA-3 and OX-45, and maps to chromosome 1q21–23. 1087.

Stebbins, C. *See* Chang, Moingeon, Lopez, Krasnow, Stebbins, and Reinherz.

Steinberg, S. *See* Brett, Gerlach, Nawroth, Steinberg, Godman, and Stern.
Steinman, R. M. *See* Bhardwaj, Lau, Friedman, Crow, and Steinman.
— *See* Langhoff and Steinman.
— *See* Metlay, Puré, and Steinman.
— *See* Romani, Inaba, Puré, Crowley, Witmer-Pack, and Steinman.
— *See* Romani, Koide, Crowley, Witmer-Pack, Livingstone, Fathman, Inaba, and Steinman.
Stern, D. *See* Brett, Gerlach, Nawroth, Steinberg, Godman, and Stern.
Sthoeger, Z. M., Wakai, M., Tse, D. B., Vinciguerra, V. P., Allen, S. L., Budman, D. R., Lichtman, S. M., Schulman, P., Weiselberg, L. R., and Chiorazzi, N. Production of autoantibodies by CD5-expressing B lymphocytes from patients with chronic lymphocytic leukemia. 255.
Stingl, G. *See* Maxfield, Moulder, Koning, Elbe, Stingl, Coligan, Shevach, and Yokoyama.
Stöckl, F. W. *See* Schmiedeke, Stöckl, Weber, Sugisaki, Batsford, and Vogt.
Storb, U. *See* Hagman, Lo, Doglio, Hackett, Rudin, Haasch, Brinster, and Storb.
Strominger, J. L. *See* Groh, Porcelli, Fabbi, Lanier, Picker, Anderson, Warnke, Bhan, Strominger, and Brenner.
— *See* Lotteau, Sands, Teyton, Turmel, Charron, and Strominger.
Stuehr, D. J., and Nathan, C. F. Nitric oxide.A macrophage product responsible for cytostasis and respiratory inhibition in tumor target cells. 1543.
—, Gross, S. S., Sakuma, I., Levi, R., and Nathan, C. F. Activated murine macrophages secrete a metabolite of arginine with the bioactivity of endothelium-derived relaxing factor and the chemical reactivity of nitric oxide. 1011.
— *See* Billiar, Curran, Stuehr, West, Bentz, and Simmons.
Sugai, S. *See* Shimizu, Yoshioka, Hirose, Sugai, Tachibana, and Konda.
Sugamura, K. *See* Takeshita, Goto, Tada, Nagata, Asao, and Sugamura.
Sugisaki, Y. *See* Schmiedeke, Stöckl, Weber, Sugisaki, Batsford, and Vogt.
Sugita, M. *See* Noma, Nakakubo, Sugita, Kumagai, Maeda, Shimizu, and Honjo.
Sung, S.-S. J. *See* Nakamura, Sung, Bjorndahl, and Fu.
Sunshine, G. H. *See* Boguniewicz, Sunshine, and Borel.
Suzuki, K., Miyasaka, H., Ota, H., Yamakawa, Y., Tagawa, M., Kuramoto, A., and Mizuno, S. Purification and partial primary sequence of a chemotactic protein for polymorphonuclear leukocytes derived from human lung giant cell carcinoma LU65C cells. 1895.
Sykes, N. *See* Monroe, Seyfert, Owen, and Sykes.

T

Tachibana, J. *See* Shimizu, Yoshioka, Hirose, Sugai, Tachibana, and Konda.
Tack, B. F. *See* Kingsmore, Vik, Kurtz, Leroy, Tack, Weis, and Seldin.
Tada, K. *See* Takeshita, Goto, Tada, Nagata, Asao, and Sugamura.
Tada, T. *See* Kurasuyama, Tohyama, and Tada.
Tagawa, M. *See* Suzuki, Miyasaka, Ota, Yamakawa, Tagawa, Kuramoto, and Mizuno.
Tagliabue, A. *See* De Magistris, Romano, Bartoloni, Rappuoli, and Tagliabue.
Takahashi, H. *See* Fouret, Du Bois, Bernaudin, Takahashi, Ferrans, and Crystal.
Takeshita, T., Goto, Y., Tada, K., Nagata, K., Asao, H., and Sugamura, K. Monoclonal antibody defining a molecule possibly identical to the p75 subunit of interleukin 2 receptor. 1323.
Takeuchi, F. *See* Watanabe, Tokunaga, Matsuki, Takeuchi, Matsuta, Maeda, Omoto, and Juji.
Takihara, Y., Reimann, J., Michalopoulos, E., Ciccone, E., Moretta, L., and Mak, T. W. Diversity and structure of human T cell receptor δ chain genes in peripheral blood γ/δ-bearing T lymphocytes. 393.
Tanaka, S. *See* Yoshimura, Robinson, Tanaka, Appella, Kuratsu, and Leonard.
Taylor, P. M. *See* Macatonia, Taylor, Knight, and Askonas.
Teh, H.-S., Kishi, H., Scott, B., and Von Boehmer, H. Deletion of autospecific T cells in T cell receptor (TCR) transgenic mice spares cells with normal TCR levels and low levels of CD8 molecules. 795.
Teklemariam, S. *See* Kaplan, Kiessling, Teklemariam, Hancock, Sheftel, Job, Converse, Ottenhoff, Becx-Bleumink, Dietz, and Cohn.
Ten, R. M., Pease, L. R., McKean, D. J., Bell, M. P., and Gleich, G. J. Molecular cloning of the human eosinophil peroxidase.Evidence for the existence of a peroxidase multigene family. 1757.
Termijtelen, A. *See* DeKoster, Anderson, and Termijtelen.
Testi, R. *See* Lanier, Testi, Bindl, and Phillips.
Teyton, L. *See* Lotteau, Sands, Teyton, Turmel, Charron, and Strominger.
Thiele, A. *See* Bhakdi, Greulich, Muhly, Eberspächer, Becker, Thiele, and Hugo.
Thomas, J. W. *See* Miller, Hoy, and Thomas.
Thorley-Lawson, D. A. *See* Staunton, Fisher, LeBeau, Lawrence, Barton, Francke, Dustin, and Thorley-Lawson.
Thorsby, E. *See* Sollid, Markussen, Ek, Gjerde, Vartdal, and Thorsby.
Tiefenthaler, G. *See* Hünig, Wallny, Hartley, Lawetzky, and Tiefenthaler.
Tohyama, N. *See* Kurasuyama, Tohyama, and Tada.
Tokunaga, K. *See* Watanabe, Tokunaga, Matsuki, Takeuchi, Matsuta, Maeda, Omoto, and Juji.
Torii, M. *See* Udomsangpetch, Wahlin, Carlson, Berzins, Torii, Aikawa, Perlmann, and Wahlgren.
Travis, W. W. *See* Mercolino, Locke, Afshari, Sasser, Travis, Arnold, and Haughton.
Trinchieri, G. *See* Cassatella, Anegón, Cuturi, Griskey, Trinchieri, and Perussia.
— *See* Cuturi, Anegón, Sherman, Loudon, Clark, Perussia, and Trinchieri.
— *See* Kozbor, Trinchieri, Monos, Isobe, Russo, Haney, Zmijewski, and Croce.

Troelstra, C. *See* Van Denderen, Hermans, Meeuwsen, Troelstra, Zegers, Boersma, Grosveld, and Van Ewijk.

Trowbridge, I. S. *See* Johnson, Greenbaum, Bottomly, and Trowbridge.

Truckenmiller, M. E. *See* Kulaga, Folks, Rutledge, Truckenmiller, Gugel, and Kindt.

Tse, D. B. *See* Sthoeger, Wakai, Tse, Vinciguerra, Allen, Budman, Lichtman, Schulman, Weiselberg, and Chiorazzi.

Tsubota, H., Lord, C. I., Watkins, D. I., Morimoto, C., and Letvin, N. L. A cytotoxic T lymphocyte inhibits acquired immunodeficiency syndrome virus replication in peripheral blood lymphocytes. 1421.

Turmel, P. *See* Lotteau, Sands, Teyton, Turmel, Charron, and Strominger.

Tycko, B., Reynolds, T. C., Smith, S. D., and Sklar, J. Consistent breakage between consensus recombinase heptamers of chromosome 9 DNA in a recurrent chromosomal translocation of human T cell leukemia. 369.

U

Udomsangpetch, R., Wahlin, B., Carlson, J., Berzins, K., Torii, M., Aikawa, M., Perlmann, P., and Wahlgren, M. *Plasmodium falciparum*–infected erythrocytes form spontaneous erythrocyte rosettes. 1835.

Urbain, J. *See* Meek, Hasemann, Pollok, Alkan, Brait, Slaoui, Urbain, and Capra.

Uyttenhove, C. *See* Van Snick, Goethals, Renauld, Van Roost, Uyttenhove, Rubira, Moritz, and Simpson.

V

Valinsky, J. E. *See* Morse and Valinsky.

Vandenbark, A. A. *See* Burns, Li, Shen, Offner, Chou, Vandenbark, and Heber-Katz.

Van Denderen, J., Hermans, A., Meeuwsen, T., Troelstra, C., Zegers, N., Boersma, W., Grosveld, G., and Van Ewijk, W. Antibody recognition of the tumor-specific *bcr-abl* joining region in chronic myeloid leukemia. 87.

Van Ewijk, W. *See* Van Denderen, Hermans, Meeuwsen, Troelstra, Zegers, Boersma, Grosveld, and VanEwijk.

Van Ommen, G. J. B. *See* De Jong, Voetdijk, Van Ommen, Kluin-Nelemans, Beverstock, and Kluin.

Van Regenmortel, M. H. V. *See* Plaué, Muller, and Van Regenmortel.

Van Roost, E. *See* Van Snick, Goethals, Renauld, Van Roost, Uyttenhove, Rubira, Moritz, and Simpson.

Van Snick, J., Goethals, A., Renauld, J.-C., Van Roost, E., Uyttenhove, C., Rubira, M. R., Moritz, R. L., and Simpson, R. J. Cloning and characterization of a cDNA for a new mouse T cell growth factor (P40). 363.

Van Voorhis, W. C., and Eisen, H. Fl-160.A surface antigen of *Trypanosoma cruzi* that mimics mammalian nervous tissue. 641.

Van Zant, G. *See* Buller, Van Zant, Eldridge, and Portis.

Vartdal, F. *See* Sollid, Markussen, Ek, Gjerde, Vartdal, and Thorsby.

Vasmel, W. L. E., Sijts, E. J. A. M., Leupers, C. J. M., Matthews, E. A., and Melief, C. J. M. Primary virus-induced lymphomas evade T cell immunity by failure to express viral antigens. 1233.

Vercelli, D., Jabara, H. H., Arai, K.-I., and Geha, R. S. Induction of human IgE synthesis requires interleukin 4 and T/B cell interactions involving the T cell receptor/CD3 complex and MHC class II antigens. 1295.

Vijayasaradhi, S. *See* Bouchard, Fuller, Vijayasaradhi, and Houghton.

Vik, D. P. *See* Kingsmore, Vik, Kurtz, Leroy, Tack, Weis, and Seldin.

Vinciguerra, V. P. *See* Sthoeger, Wakai, Tse, Vinciguerra, Allen, Budman, Lichtman, Schulman, Weiselberg, and Chiorazzi.

Vitetta, E. S. *See* Fernandez-Botran, Sanders, and Vitetta.

Vitti, G. F. *See* Hart, Vitti, Burgess, Singleton, and Hamilton.

Voetdijk, B. M. H. *See* De Jong, Voetdijk, Van Ommen, Kluin-Nelemans, Beverstock, and Kluin.

Vogt, A. *See* Schmiedeke, Stöckl, Weber, Sugisaki, Batsford, and Vogt.

Von Boehmer, H. *See* Teh, Kishi, Scott, and Von Boehmer.

Vujanovic, N. L. *See* Chambers, Vujanovic, DeLeo, Olszowy, Herberman, and Hiserodt.

W

Waage, A., Brandtzaeg, P., Halstensen, A., Kierulf, P., and Espevik, T. The complex pattern of cytokines in serum from patients with meningococcal septic shock.Association between interleukin 6, interleukin 1, and fatal outcome. 333.

Wahlgren, M. *See* Udomsangpetch, Wahlin, Carlson, Berzins, Torii, Aikawa, Perlmann, and Wahlgren.

Wahlin, B. *See* Udomsangpetch, Wahlin, Carlson, Berzins, Torii, Aikawa, Perlmann, and Wahlgren.

Wakai, M. *See* Sthoeger, Wakai, Tse, Vinciguerra, Allen, Budman, Lichtman, Schulman, Weiselberg, and Chiorazzi.

Waldmann, H. *See* Qin, Cobbold, Benjamin, and Waldmann.

Wallny, H.-J. *See* Hünig, Wallny, Hartley, Lawetzky, and Tiefenthaler.

Warnke, R. A. *See* Groh, Porcelli, Fabbi, Lanier, Picker, Anderson, Warnke, Bhan, Strominger, and Brenner.

Watanabe, Y., Tokunaga, K., Matsuki, K., Takeuchi, F., Matsuta, K., Maeda, H., Omoto, K., and Juji, T. Putative amino acid sequence of HLA-DRB chain contributing to rheumatoid arthritis susceptibility. 2263.

Watkins, D. I. *See* Tsubota, Lord, Watkins, Morimoto, and Letvin.
Watts, S. *See* Linsk, Watts, Fischer, and Goodenow.
Webb, D. S. A. *See* Perno, Yarchoan, Cooney, Hartman, Webb, Hao, Mitsuya, Johns, and Broder.
Webb, S. R., Okamoto, A., Ron, Y., and Sprent, J. Restricted tissue distribution of Mls^a determinants. Stimulation of Mls^a-reactive T cells by B cells but not by dendritic cells or macrophages. 1.
Weber, R. *See* Schmiedeke, Stöckl, Weber, Sugisaki, Batsford, and Vogt.
Weiland, F. *See* Jonjić, Mutter, Weiland, Reddehase, and Koszinowski.
Weinstein, Y., Morishita, K., Cleveland, J. L., and Ihle, J. N. Interleukin 3 (IL-3) induces transcription from nonrearranged T cell receptor γ loci in IL-3-dependent cell lines. 2059.
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1199 STIPAN JONJIĆ, WOLFGANG MUTTER, FRANK WEILAND, MATTHIAS J. REDDEHASE, and ULRICH H. KOSZINOWSKI. Site-restricted persistent cytomegalovirus infection after selective long-term depletion of $CD4^+$ T lymphocytes

1213 DON J. DIAMOND, FORREST B. NELSON, and ELLIS L. REINHERZ. Lineage-specific expression of a T cell receptor variable gene promoter controlled by upstream sequences

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BRIEF DEFINITIVE REPORTS

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1841 EARL P. BENDITT and RICK L. MEEK. Expression of the third member of the serum amyloid A gene family in mouse adipocytes

1847 DANUTA KOZBOR, GIORGIO TRINCHIERI, DIMITRI S. MONOS, MASAHARU ISOBE, GIANDOMENICO RUSSO, JO ANN HANEY, CHESTER ZMIJEWSKI, and CARLO M. CROCE. Human TCR-γ^+/δ^+, $CD8^+$ T lymphocytes recognize tetanus toxoid in an MHC-restricted fashion

1853 TAKAFUMI NOMA, HIROSHI NAKAKUBO, MASAHIKO SUGITA, SHUNICHI KUMAGAI, MICHIYUKI MAEDA, AKIRA SHIMIZU, and TASUKU HONJO. Expression of different combinations of interleukins by human T cell leukemic cell lines that are clonally related

1859 AZAD KAUSHIK, DAN H. SCHULZE, CONSTANTIN BONA, and GARNETT KELSOE. Murine V_κ gene expression does not follow the V_H paradigm

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1879 THOMAS M. J. SCHMIEDEKE, FRANK W. STOCKL, REINHOLD WEBER, YUICHI SUGISAKI, STEPHEN R. BATSFORD, and ARNOLD VOGT. Histones have high affinity for the glomerular basement membrane. Relevance for immune complex formation in lupus nephritis

1895 KAZUO SUZUKI, HIROSHI MIYASAKA, HIROMI OTA, YOSHIO YAMAKAWA, MUNEKAZU TAGAWA, ATSUSHI KURAMOTO, and SATOSHI MIZUNO. Purification and partial primary sequence of a chemotactic protein for polymorphonuclear leukocytes derived from human lung giant cell carcinoma LU65C cells

1903 TARIQ M. HAQQI, SUBHASHIS BANERJEE, GARY D. ANDERSON, and CHELLA S. DAVID. RIII S/J ($H\text{-}2^r$). An inbred mouse strain with a massive deletion of T cell receptor V_β genes

1911 JAMES HAGMAN, DAVID LO, LYNN T. DOGLIO, JOHN HACKETT, JR., CHARLES M. RUDIN, DEANNA HAASCH, RALPH BRINSTER, and URSULA STORB. Inhibition of immunoglobulin gene rearrangement by the expression of a λ2 transgene

1931 ELEANOR M. BOLTON, J. ALASTAIR GRACIE, J. DOUGLAS BRIGGS, JAAP KAMPINGA, and J. ANDREW BRADLEY. Cellular requirements for renal allograft rejection in the athymic nude rat

1947 HIROKI SANUI, T. MICHAEL REDMOND, SATOSHI KOTAKE, BARBARA WIGGERT, LI-HONG HU, HANAH MARGALIT, JAY A. BERZOFSKY, GERALD J. CHADER, and IGAL GERY. Identification of an immunodominant and highly immunopathogenic determinant in the retinal interphotoreceptor retinoid-binding protein (IRBP)

1961 BIJAY MUKHERJI, AMALA GUHA, NITYA G. CHAKRABORTY, M. SIVANANDHAM, AMGAD L. NASHED, and M. T. ERGIN. Clonal analysis of cytotoxic and regulatory T cell responses against human melanoma

1977 J. BRETT, H. GERLACH, P. NAWROTH, S. STEINBERG, G. GODMAN, and D. STERN. Tumor necrosis factor/cachectin increases permeability of endothelial cell monolayers by a mechanism involving regulatory G proteins

1993 BETH D. JAMIESON and RAFI AHMED. T cell memory. Long-term persistence of virus-specific cytotoxic T cells

2007 NINA S. LEVY, URSULA V. MALIPIERO, SERGE G. LEBECQUE, and PATRICIA J. GEARHART. Early onset of somatic mutation in immunoglobulin V_H genes during the primary immune response

2021 A. S. CROSS, J. C. SADOFF, N. KELLY, E. BERNTON, and P. GEMSKI. Pretreatment with recombinant murine tumor necrosis factor α/cachectin, and murine interleukin 1 α protects mice from lethal bacterial infection

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2085 JUAN CARLOS ZUNIGA-PFLUCKER, SUSAN A. MCCARTHY, MARGARET WESTON, DAN L. LONGO, ALFRED SINGER, and ADA M. KRUISBEEK. Role of CD4 in thymocyte selection and maturation

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